METHOD OF WIRELESSLY CONNECTING AT LEAST TWO DEVICES AND WIRELESSLY CONNECTABLE DEVICE USING THE METHOD

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application is a continuation of U.S. application Ser. No. 13/598,806, filed Aug. 30, 2012, which claims priority under 35 U.S.C. §119 from Korean Patent Application No. 10-2011-0088234, filed on Aug. 31, 2011, in the Korean Intellectual Property Office, the disclosures of which are incorporated by reference herein in their entirety.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] The present general inventive concept relates to wireless connection between devices, and more particularly, to a method of wirelessly connecting at least two devices and a wirelessly connectable device using the method.

[0004] 2. Description of the Related Art

[0005] Windows-based operating systems currently support a software-enabled access point (softAP) function by using virtual WiFi from Windows 7. The softAP function is a function of changing a wireless local area network (WLAN) card to a wireless access point (AP). This enables another device to perform a wireless search and a wireless connection and access the Internet.

[0006] Users change the WLAN card to the wireless AP by using the softAP function in a Windows 7 environment as follows. First, a WLAN mode is changed to another mode. The WLAN mode is a default setting and means the Internet is accessible over a WLAN. In this regard, a "switch to a station mode" is selected for a wireless AP mode.

[0007] Thereafter, a wired/wireless LAN card that is installed in a computer and is connected to the Internet is selected. Then, a wireless LAN mode is changed to a softAP mode. Thereafter, basic settings, such as a name of a wireless AP or limited access, are made. In this regard, a service set identifier (SSID) setting, a password setting, a channel setting, and a blocking setting using media access control (MAC) are set. Such settings enable another device to perform a wireless search and a wireless connection and access the Internet. In this regard, a password is input to access a soft AP that was set as described above in another computer. If the password is correctly input, the softAP function becomes available.

[0008] Although such a softAP function is very useful, knowledge relating to a virtual WiFi, an SSID, etc., is necessary, and a user's input and settings are also necessary, in order to use the softAP function. Also, a password of the softAP is necessary to access the softAP. Thus, the softAP may not be easy to use.

SUMMARY OF THE INVENTION

[0009] The present general inventive concept provides a method of wirelessly connecting at least two devices, capable of wireless connection between devices without having to perform an inconvenient setting process.

[0010] The present general inventive concept also provides a device wirelessly connectable to an external device, capable of wireless connection between devices without having to perform an inconvenient setting process.

[0011] Additional features and utilities of the present general inventive concept will be set forth in part in the description which follows and, in part, will be obvious from the description, or may be learned by practice of the general inventive concept.

[0012] According to features and utilities of the present general inventive concept, there is provided a method of wirelessly connecting at least two devices for data communication, the method including generating and wirelessly sending service set identifier (SSID) information of the at least two devices, the at least two devices performing the generating and the wireless sending, collecting and analyzing the wirelessly sent SSID information, the collecting and the analyzing to be performed by the at least two devices, setting one of the at least two devices as a server based on a result of the analyzing, and wirelessly connecting the at least two devices, the wirelessly connecting to be performed by the device set as the server.

[0013] The setting may include setting one of the at least two devices as the server according to a priority between the SSID information of the at least two devices.

[0014] The setting may include if no device is set as the server, setting one of the at least two devices as the server according to the priority between the SSID information of the at least two devices.

[0015] The setting may include if there is a device set as the server based on the result of the analyzing, requesting wireless connection from the device set as the server.

[0016] Each of the SSID information may include connection status information indicating wireless connection status of a corresponding device.

[0017] The connection status information may include one of a server status indicating connection status of a device set as a server, a client status indicating connection status of a device connected to the device set as the server, and a device status indicating a connection status of a device that is not wirelessly connected to an external device.

[0018] Each of the SSID information may further include wireless connection priority information of the corresponding device, and the wireless connection priority information includes a serial number or a MAC (Media Access Control) address of a wireless local area network (WLAN) card installed in the corresponding device or a random number optionally generated by the corresponding device, wherein a greater serial number or a MAC (Media Access Control) address or random number is set to indicate a higher priority.

[0019] Each of the SSID information may further include channel information to identify a group of devices and being settable by a user through a user interface, and the wireless connecting includes comparing the channel information of the at least two devices, if the channel information of the at least two devices is the same with each other, checking whether the connection status information is set as the server, and wirelessly connecting a device that is to be wirelessly connected and the device whose connection status information is set as the server.

[0020] Each of the SSID information may further include an identifier of a wireless connection program installed in a corresponding device, and the wireless connecting includes determining whether the identifiers of the wireless connection programs respectively installed in at least two devices are the same, if the identifiers of the wireless connection programs are the same, checking whether the connection status information of the device is set as the server, and, if